

## REMARKS

Page 3, line 13, of the Amendment of May 28, 2002, states "Claim 22 recites a woven fabric impregnated with a resin and a binder." The Examiner is interpreting this statement to mean that Applicants are now arguing that the woven fabric is impregnated with a binder. Also, the Examiner has been taking the position that the "binder" in claim 22 is within the scope of the "sizing agent" of Kishi. Both these interpretations are not correct.

To prevent these confusions, claim 22 now clearly recites "A cloth prepreg made by a wet process comprising (i) a reinforcing fiber-containing woven fabric impregnated with a resin, (ii) a binder distributed in a line-like manner to maintain yarn flatness and (iii) optionally a sizing agent on the reinforcing fiber."

The term "sizing agent" is used only once in the application and it distinguishes sizing agent from binder. Please review the lines from page 7, line 22, to page 8, line 7, in the application as filed. These lines read as follows:

In this invention, if the fabric weave slips during the prepreg manufacturing process, the crossing point of the warp and weft should be fixed by a binder deposited so as to assume a line-like configuration. From the viewpoint of low cost and a minimal amount of binder, it is preferable that this binder be a low melting point polymer, for example, of nylon copolymer, polyester copolymer, polyethylene or polypropylene. Of these, nylon copolymer glues well with carbon fiber, requiring only a minimal amount of binder, and also glues well with the matrix resin of the FRP. These low melting point polymers may be inserted into the woven fabric simultaneously with the warp and/or weft of the reinforcing fiber filament and heated to above the melting point of the binder on the weaving machine to melt the binder, to produce bound reinforcing woven fabric. Thus, a binding process of reinforcing woven fabric can be carried out at low cost.

In general, the low melting point polymer preferably has a melting point of 100 to 180°C. If it is below 100°C, the binder is apt to melt during the drying operation, while if it is above 180°C, too high a temperature may be needed for melting and any *sizing agent* present on the reinforcing fibers may be subject to degradation. [Emphasis added.]

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Clearly, the specification itself distinguishes "binder" and "sizing agent." Kishi's sizing agent cannot read on both the binder and sizing agent of claim 22 because they are both different as clearly recited in claim 22 and new independent claims 41 and 42 and further explained in the specification. In fact, persons of ordinary skill in this art would recognize that Kishi's sizing agent must read on the term "sizing agent" of the claims because the term "sizing agent" in Kishi and the claims has its ordinary meaning as that stated in "Fairchild's Dictionary." See Action of January 29, 2001.

Also, new dependent claims 43 and 44 are added to clarify that the binder could be through the fabric, on the fabric or through and on the fabric.

Attached is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

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Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

22. (Five Times Amended) A cloth prepreg made by a wet process comprising  
(i) a reinforcing fiber-containing woven fabric impregnated with a resin, [and] (ii) a binder  
distributed in a line-like manner [on the fabric] to maintain yarn flatness and (iii) optionally a  
sizing agent on the reinforcing fiber,  
the fabric comprising a number of crossing points of warp and weft in a range of from  
2,000 to 70,000/m<sup>2</sup>, said warp and said weft being substantially free from twist, a width of 3 to  
20 mm and a flatness as defined by a ratio of yarn width to yarn thickness of at least 20, and  
the prepreg having a cover factor of at least 90% [and  
wherein an amount of the binder used is within about 0.5 to 15 g/m<sup>2</sup>].

Please add the following new claims:

41. (New) A cloth prepreg made by a wet process comprising (i) a reinforcing fiber-  
containing woven fabric impregnated with a resin, (ii) a binder distributed in a line-like manner  
to maintain yarn flatness and (iii) a sizing agent on the reinforcing fiber,  
the fabric comprising a number of crossing points of warp and weft in a range of from  
2,000 to 70,000/m<sup>2</sup>, said warp and said weft being substantially free from twist, a width of 3 to  
20 mm and a flatness as defined by a ratio of yarn width to yarn thickness of at least 20, and

the prepreg having a cover factor of at least 90%.

42. (New) A cloth prepreg made by a wet process comprising (i) a reinforcing fiber-containing woven fabric impregnated with a resin, (ii) a binder distributed in a line-like manner to maintain yarn flatness and (iii) optionally a sizing agent on the reinforcing fiber, the fabric comprising a number of crossing points of warp and weft in a range of from 2,000 to 70,000/m<sup>2</sup>, said warp and said weft being substantially free from twist, a width of 3 to 20 mm and a flatness as defined by a ratio of yarn width to yarn thickness of at least 20, the prepreg having a cover factor of at least 90%, and said binder being a polymer having a melting point of 100 to 180°C.

43. (New) The cloth prepreg of claim 22, wherein the binder is through the fabric.

44. (New) The cloth prepreg of claim 22, wherein the binder is on the fabric.